# PD-L1 Antibody Rabbit Monoclonal PDL1/8591R / Programmed cell death 1 ligand 1 [clone PDL1/8591R] (V5292)

| Catalog No. | Formulation | Size |
|---|---|---|
| V5292-100UG | 0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide | 100 ug |
| V5292-20UG | 0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide | 20 ug |
| V5292SAF-100UG | 1 mg/ml in 1X PBS; BSA free, sodium azide free | 100 ug |

Recombinant RABBIT MONOCLONAL

**Bulk quote request**

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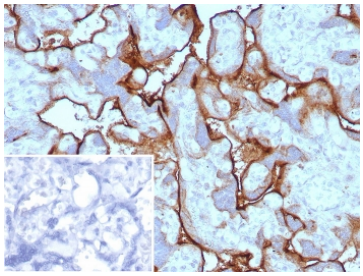
| **Availability** | 1-3 business days |
| **Species Reactivity** | Human |
| **Format** | Purified |
| **Host** | Rabbit |
| **Clonality** | Recombinant Rabbit Monoclonal |
| **Isotype** | Rabbit IgG, kappa |
| **Clone Name** | PDL1/8591R |
| **Purity** | Protein A/G affinity |
| **UniProt** | Q9NZQ7 |
| **Localization** | Cell Surface, Cytoplasm |
| **Applications** | Immunohistochemistry (FFPE) : 1-2ug/ml for 30 min at RT |
| **Limitations** | This PD-L1 antibody is available for research use only. |



Immunohistochemistry analysis of PD-L1 antibody in human placenta. PD-L1 Antibody Rabbit Monoclonal PDL1/8591R was used for immunohistochemistry on FFPE human placental tissue. Distinct HRP-DAB brown membranous staining is observed along the trophoblastic epithelial layer of chorionic villi, consistent with the known surface localization of Programmed death-ligand 1 (PD-L1 / CD274), an immune checkpoint ligand that contributes to regulation of maternal-fetal immune tolerance. The staining outlines the syncytiotrophoblast and cytotrophoblast layers surrounding villous structures, while underlying stromal components show minimal signal. The rabbit monoclonal antibody clone PDL1/8591R detects PD-L1 expression in placental trophoblastic epithelium within the villous architecture. Inset: PBS used in place of primary antibody as a secondary antibody negative control. HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 min and allow to cool before testing.

## Description

The PD-1/PD-L1 immune checkpoint pathway plays a central role in regulating T cell responses and maintaining immune tolerance. PD-L1 Antibody Rabbit Monoclonal PDL1/8591R targets this transmembrane immunoregulatory molecule encoded by the CD274 gene. CD274, commonly described in the literature as PD-L1, Programmed death-ligand 1, B7-H1, or PDCD1 ligand 1, is a type I transmembrane glycoprotein that plays a central role in regulating immune responses through interaction with the inhibitory receptor PD-1 on activated T lymphocytes. Because of this biology, PD-L1 antibody detection is widely used in research examining immune checkpoint signaling, tumor immune escape mechanisms, and immune regulation within epithelial and immune cell populations.

CD274 is a member of the B7 family of immune regulatory ligands and functions primarily by binding the PD-1 receptor encoded by the PDCD1 gene. Engagement of PD-L1 with PD-1 transmits inhibitory signals that reduce T cell proliferation, cytokine production, and cytotoxic activity. This immune checkpoint pathway is essential for maintaining peripheral immune tolerance and preventing excessive immune activation. However, many tumors exploit this pathway by upregulating PD-L1 expression on tumor cells, which suppresses anti-tumor immune responses and allows malignant cells to evade immune surveillance. Because of this mechanism, PD-L1 antibody reagents are frequently used in studies investigating immune checkpoint biology, tumor immunology, and inflammatory signaling pathways.

The CD274 gene is located on chromosome 9p24.1 and encodes a transmembrane glycoprotein containing extracellular immunoglobulin-like domains typical of B7 family proteins. Under physiological conditions, PD-L1 expression can be detected on antigen-presenting cells including macrophages and dendritic cells, as well as on some epithelial and endothelial cells. Expression is strongly induced by inflammatory cytokines, particularly interferon-gamma, which activates transcriptional pathways that increase PD-L1 production during immune responses. In pathological settings such as cancer, PD-L1 expression is frequently elevated in tumor epithelial cells and tumor-associated immune cells, linking CD274 expression to regulation of the tumor immune microenvironment.

Several strong literature synonyms are commonly used for this protein, including PD-L1, Programmed death-ligand 1, B7-H1, and PDCD1 ligand 1. Integrating these established names ensures consistent recognition of the CD274 immune checkpoint molecule across immunology, oncology, and pathology research. In tissue-based studies, PD-L1 antibody staining is typically observed as membranous signal in epithelial cells and immune cell populations where the protein functions as a cell surface ligand regulating T cell activity. Clone PDL1/8591R is a rabbit monoclonal antibody designed to recognize PD-L1 protein expression in relevant experimental systems. This PD-L1 antibody is available from NSJ Bioreagents for investigators studying immune checkpoint signaling, tumor immunology, and immune regulation in epithelial and lymphoid tissues.

This PD-L1 antibody is part of a broader PD-L1 antibody panel offered by NSJ Bioreagents.

## Application Notes

Optimal dilution of the PD-L1 antibody rabbit monoclonal PDL1/8591Rshould be determined by the researcher.

## Immunogen

A recombinant partial protein sequence (within amino acids 190-290) from the human protein was used as the immunogen for the rabbit monoclonal PD-L1 antibody.

## Storage

Aliquot the PD-L1 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.